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研究简报

马来丝虫3-磷酸甘油醛脱氢酶基因的克隆、序列分析及编码产物B细胞表位预测

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摘要
根据GenBank中马来丝虫3-磷酸甘油醛脱氢酶基因(*Bm*G3PD基因)序列设计引物, 以马来丝虫mRNA为模板, RT-PCR扩增BmG3PD基因, 将其克隆入pGEM-T载体, 转化大肠埃希菌（*E. coli*）DH5α, 筛选阳性克隆。经*Eco*RⅠ和*Xho*Ⅰ双酶切及PCR鉴定, 获得阳性重组质粒pGEM-*Bm*G3PD, 经序列分析及同源性比较, 以及对其编码产物进行B细胞表位预测, 结果表明PCR扩增的特异性条带为1 020 bp, 与预期相符, 与GenBank已知基因序列同源性为99%。编码产物B细胞表位预测, 氨基酸区域可能在22～36、242～255、303～318和326～336位。

关键词 马来丝虫; 3-磷酸甘油醛脱氢酶; 基因克隆; 序列分析; B细胞表位

分类号

Cloning, Sequencing of G3PD Gene from *Brugia malayi* and Prediction of B cell Epitopes in its Amino Acid Sequence

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Abstract

Specific primers were designed and synthesized based on the

reported glyceraldehydes-3-phosphate dehydrogenase（*Bm*G3PD） gene of Brugia malayi（GenBank Accession No. U18137）. Total RNA was extracted from

Brugia malayi and its *Bm*G3PD gene was amplified

by reverse transcription-polymerase chain raction（RT-PCR）. The PCR product was purified and cloned into plasmid pGEM-T, then transformed into *Escherichia coli* DH5α. The recombinant

plasmids were screened and identified by digestion

with restriction enzyme and PCR amplification. The positive recombinant plasmid pGEM-T-*Bm*G3PD was confirmed by sequencing and homology comparison. Five parameters and

methods were used to predict B-cell epitopes in amino acid sequence of *Bm*G3PD. The amplified DNA fragment（1 020 bp） had a high identity of 99% with the *Bm*G3PD gene sequence of

Brugia malayi. B-cell epitopes of *Bm*G3PD were probably at or adjacent to 22-36, 242-255, 303-318 and 326-336 in its amino acid sequence.

Key words *Brugia malayi*; G3PD; Gene cloning; Sequence analysis; B-cell epitope

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本刊中 包含“马来丝虫; 3-磷酸甘油醛脱氢酶; 基因克隆; 序列分析; B细胞表位”的 相关文章
本文作者相关文章
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